ART. XIX.—*Transactions of the Epidemiological Society of London.* Vol. II. Part II. Sessions 1864–5, and 1865–6. 8vo. pp. 280. London, 1867.

THE object of the Epidemiological Society of London is the study of epidemic and endemic diseases, with especial reference to the investigation of the various external agencies, and the different conditions of life which favour their development or influence their character, and the sanitary and hygienic measures best fitted to check, mitigate, or prevent them. There will be found in each volume of its *Transactions* a record of valuable facts, bearing directly upon one or other of these subjects, either in confirmation, development, or rectification of opinions heretofore entertained, or to form the basis of correct views of the etiology, and the means for the amelioration and prophylaxis of disease whether of an endemic or epidemic character, the causation and consequently the prevention of which are as yet involved in obscurity. Many of the facts recorded in the publications of the Society, in their isolated form and limited range, have, of themselves, but little practical value; but when collated with other observations bearing upon the same questions, collected in other localities, or in the same localities during different occurrences of the same or similar diseases, they become invaluable as the means by which alone certain important truths, bearing upon the production of disease, can be satisfactorily determined. Of this character are the majority of the observations embraced in the leading papers which compose the volume before us.

The first paper is devoted to the notice of "a case of presumed Delhi boil," by F. J. Burge. The general characters of disease presented in the case described, were, we are told, more allied to the eruptive disease known to the English and American physicians as rupia, than to any other. Apparently a somewhat kindred malady, known as the "Aleppo evil," prevails in the valleys of the Tigris and Euphrates, to which locations it is confined. It is said to occur only once in the same individual. Both maladies, however, are referred to similar exciting causes. The general condition of the parents and child, in the case described; the non-existence of throat affection in either; the absence of any purple hue of the parts affected, argue against a syphilitic taint. The purulent and non-vesicular character of the eruption, with the concomitant circumstances, and the refractory nature of the complaint, tend to separate it from rupia. Its communication by contagion is doubtful. It is reported that the occurrence of measles is prophylactic of the disease.

The next paper is on "the prevalence, distribution, and limitation of scarlet fever in England," by J. N. Radcliffe, though highly interesting in all its details, will not admit of any satisfactory analysis adapted to our limits.

Then follows a paper by Dr. Babington, "on the limitation of *Venereal diseases* among the civil population. It is marked throughout by good sense, but suggests no preventive measure that would be tolerated or could be carried out successfully in any portion of the United States.

We have next a communication from Dr. Smart, R. N., in respect to *Diphtheria*, as it has occurred in Bermuda. It presents no new facts in respect to the causation and general pathology of the disease.

Dr. R. Lawson presents a short notice of "*Epidemics* in the Colonies of Cape of Good Hope and Natal, in 1862–63." Of the epidemics scarcely more than a mere list is given. We are informed that beyond the Tugela, in 1862, a fever prevailed during the early part of the year, which the traders described as very fatal. Death was very frequently preceded by "yellowness of surface and black vomit." During the same season a similar disease prevailed at Klerkdorp, in lat. 26½ S., long. 37½ E., about three hundred miles from the sea. It commenced in January, and carried off fourteen or fifteen persons out of a very small population. In 1859 three such cases were observed in soldiers at King William's Town, in the south of Africa. They proved quickly fatal. The medical officers who treated the cases considered that they bore the characeristics of yellow fever.

The subject of "*Vaccination* in Tasmania," is treated of by Dr. E. S. Hall. His remarks have little interest beyond what is merely local to the island indicated.

J. N. Radcliffe describes "recent additions to our knowledge of *Epidemics in England*, during the sixteenth and seventeenth centuries." A very interesting medico-historical paper. A similar remark may be made also in reference to the succeeding paper by Dr. J. Stark, presenting "Remarks on the *Epidemic Fever* of Scotland, during 1863–64–65, and on the epidemics of fever which have prevailed in Scotland during the past century and a quarter."

Dr. Stark remarks, that in all previous epidemics of which we have accurate records, more than one type of fever has prevailed; the present epidemic in Scotland presenting no exception to this general law. While pure spotted typhus and enteric fever have constituted the majority of the cases, instances of relapsing fever, of simple continued fever, of gastric fever, and of febricula, were not few. But it is useless to speak of types of fever unless we distinctly understand one another as to the names and definitions we assign to each form. The names and definitions adopted by Dr. Stark are as follows:—

1. *Typhus fever* (spotted fever, low, putrid, brain or nervous fever). A continued fever, characterized by great prostration, the early appearance on the skin of a mulberry or measly rash (*but not in successive crops*), generally remaining visible during the course of the disease. Bowels generally confined.

2. *Enteric fever* (typhoid, gastro-enteric, and gastric-fever, dothinenteritis). A continued fever, with rose-coloured spots, appearing chiefly on the trunk of the body, about the end of the first week, *in successive crops*, each continuing for about three or four days. Bowels generally loose, abdominal pain, enlargement and ulceration of the aggregated glands of the ileum usually met with on dissection.

3. *Relapsing fever* (relapsing or short typhus, bilious typhoid fever, typhinia, synocha). A continued fever of various but short duration; in general absence of eruption; intermission of all the symptoms, and an apparent return to health for a longer or shorter period, the fever relapsing after from five to eight days or more; there being often more than one relapse in the course of the disease. Skin often dark, or more or less yellow. A strong tendency to enlargement of the liver and spleen.

4. *Gastric fever* (bilious fever). A continued fever without eruption, attended by gastric and bilious derangement. Skin often more or less yellow.

5. *Simple continued fever* (simple typhus, simple fever). A continued fever without eruption, and with no tendency to relapse.

6. *Febricula;* a simple fever without eruption, and, at the most, only from two to four days' continuance.

7. *Infantile fever* (infantile remittent fever). Fever occurring in childhood, with daily exacerbations and remissions, and a tendency to diarrhœa. Cases of enteritis, and of continued fever in some of its forms, are often mistaken for this fever—if, indeed, it be anything else than a form of enteritis.

"It is a great mistake," Dr. S. remarks, "to suppose that either of the above forms of fever are new forms, or of recent origin, as if the old well-known spotted typhus had been gradually giving way to these other forms, or was changing its type, as is the favourite theory with some. In almost every epidemic of which we have particular accounts left us, it would seem that nearly every one of the now recognized leading types of fever have co-existed, and that these several forms of types recur in the epidemics of to-day as unchanged as they were a century and a half ago." "Modern nosologists incline to regard each form of fever as a distinct species." This Dr. S. regards as a mistake. To him they appear to be only distinct varieties. "In every epidemic numerous cases occur which it is quite impossible to refer with certainty to any of the forms, as they seem to partake of the character of more than one, and sometimes actually pass from the one to the other."

From the facts adduced in the paper before us, it would appear that in every epidemic of fever, nearly all the varieties of fever occur; but, at the same time, that every particular epidemic has its own special characteristics, because of the predominance of one or other form of fever.

"A very remarkable fact has been observed in Scotland, and that is, that the same type of fever does not prevail in each locality; while one form seems to take the lead in one locality, another and very different form seems to take the lead in another. This fact deserves special notice, inasmuch as it would seem to prove that, if we admit that epidemics of fever are chiefly owing to general—say atmospheric—causes, we must also allow that local causes have a strongly modifying influence, causing the fever to assume a type in one place different from that in another."

Facts would seem to bestow considerable probability upon a suggestion of Dr. S., namely, that the form of fever which furnishes only a *small* proportion of the cases in any epidemic of fever, ranks very high in mortality.

Dr. Smart presents a very excellent and highly instructive paper "On Scarlatina Rheumatica, vel Arthritica (*Copeland*): *Breakbone Fever*, or *Dengue.*"

There occurs within the epidemic range of yellow fever, a febrile affection, known as breakbone fever or dengue. Its characteristics are severity of accession, a combination of skin eruption with rheumatic pains, and favourableness of result. It has been known to accompany yellow fever in epidemic seasons, holding then a somewhat analogous relation to it as that which diarrhœa holds to cholera in epidemics of the latter. There are grounds for suspicion that a ship, possessing bad hygienic conditions, brought within an epidemic of dengue, may have genuine yellow fever developed on board her.

Basing his account of dengue upon the study of its recent occurrences in the island of Bermuda, Dr. S. sketches its symptomatology; of this we present the following sketch:—

Incubative stage.—Uncertain. Often indisposition of a few days preceded by rigor or chills, frequently attended by disorder of chylopoietic viscera. In quite as many instances the attack was sudden, and at once violent.

Invasion.—Rarely attended with rigors save in very sudden attacks. The febrile stage was usually preceded by chills and a sense of creeping through the back and limbs, followed by prostration and a sense of danger, amounting, sometimes, to apathy. In two children, aged about 10 years, the fever was ushered in by epileptiform convulsions.

Heat stage.—Intense frontal and orbital pain; a feeling as if the eyes were being forced from their sockets; severe pains in back and limbs; restlessness; secretions generally inactive; eyes reddened and dry; face, neck, and trunk of a scarlatinous, sometimes rubeoloid hue; temperature much increased; diminution of external sensibility. Pulse excited in frequency, usually labouring in force. In cases of sudden onset tongue unaffected, but thickly coated, often yellow, where there had been premonitory indisposition.

This stage lasted, in different cases, from six to thirty-six hours, and then remitted, "by perspiration, in a drowsy sleep." In, perhaps, the majority of patients, milder febrile reactions and remissions continued still to continue for a couple of days, during which disappeared, first the headache, then the spinal pains, and lastly those of the limbs. About the fourth day convalescence commenced with free spontaneous stools, and restored kidney secretion: after a few days strength was restored, and the ordinary state attained.

The eruption was usually bright red, with raised papillæ of skin, the redness disappearing under pressure and returning when this was removed. In the milder cases the skin was of a duskier hue, fading on pressure and disappearing during convalescence. Sudamina often appeared about the neck and trunk during the sweating crisis. "It was evident throughout the epidemic, that with a vivid rash in the first stage, there was protection from second attacks."

"The fallen pulse, increasing in frequency on rising from the recumbent to the erect position, on which change syncope occurs at times, was a constant phenomenon, although less strongly marked, and of shorter continuance in some cases than in others. In the severer form of the fever, the irregular fever reactions of the stage of subsidence continued until the seventh day, when a well-marked metaposis occurred, followed by the series of symptoms which distinguish this epidemic disease."

Previously to that change, in the severest form, the phenomena already described were more marked. While on the face the eruption was continuous, like scarlatina, on the chest it was patchy, like rubeola. The yellow-coated, red-edged tongue, the diarrhœa, and general soreness of abdomen, indicated disorder of the liver and digestive mucous tract. Hemorrhagic effort towards the surface was indicated by epistaxis and turgescence of the mouth lining.

After the seventh day change, the eruption became universally rubeoloid over body and limbs; no fever heat; hemorrhagic effort quickly disappeared; for several days the circulation increased constantly in strength; the headache suddenly ceased, while the dorsal and limb pains lingered. This was but a prolongation of the stage of subsidence, during which the tongue continued coated, showing a morbid condition of the gastro-hepatic functions. As the loaded state of the tongue, after a partial disappearance of it in the sweating stage, in several instances returned, it was inferred that there existed depraved secretions from the stomach and its collateral viscera, resulting from the congested statis of blood in them, of which there were so many simultaneous indications externally. Other organs besides the liver were liable to engorgement. More rarely the respiratory mucous track displayed symptoms of passive engorgement; hæmoptysis occurred in one case.

Dengue has no regular sequelæ, which fact diagnoses it from rheumatism and from the proper eruptive fever.

For the little that is known in relation to the pathological anatomy of dengue, of its probable etiology, and of its relation to yellow fever, we must refer to the paper of Dr. S. We cannot command the space which an analysis of those portions of it would require.

"On the outbreak of *Epidemic Cerebro-spinal meningitis* in the province of Dantzic in 1865," is an interesting communication from Professor Hirsch, of Berlin. Though the well recorded facts embraced in it add but little to our knowledge of the disease to which they refer, they are nevertheless valuable if only to confirm our own observations in respect to the causes, character, course, and treatment of a formidable and often very acute disease. We concur with Dr. H. in his remarks upon the value of narcotics in the treatment of the disease under consideration.

Dr. W. D. Moore communicates a paper on "the *State of Disease in Sweden* during the years 1862-1863." The prevailing diseases were measles, diphtheria, and smallpox. Dysentery and ague were prevalent to only a slight extent.

Dr. F. J. Brown describes "an Epidemic of *Cerebro-spinal meningitis* at Rochester, with introductory remarks on other epidemics that preceded it. These latter were relapsing typhus fever, August, 1864, accompanied with and followed by severe aphthous affections of the mouth, throat, anus or vulva. Hooping-cough, December, 1864; acute colitis, June, 1865, three cases; idiopathic tetanus, March and July, 1865, two cases.

Cerebro-spinal disorder appeared in Rochester under two forms: 1. *Cerebro-spinal neuro-myalgia*, and 2. *Cerebro-spinal meningitis.*

"The neuro-myalgia," says Dr. B., "has presented two varieties differing in degree of severity, viz: (*a*) Cases marked principally by the occurrence of vertigo and nuchal stiffness; (*b*) Cases manifesting severe pains, generally throughout the body and extremities, and accompanied by vomiting, in addition to nuchal pains and stiffness, and a few head symptoms."

On the subject of cerebro-spinal meningitis the paper presents nothing absolutely new.

An abstract is given of a paper by Dr. A. H. Howe, "on the *Laws of Pestilence.*"

The abstract comprises twenty-two propositions, many of which are not altogether destitute of a probable truthfulness. As a series of laws explanatory of the appearance, source, progress, and spread of epidemics, they are at best but hypothetical, though, we admit, highly plausible. To understand correctly the views of the author, the entire abstract as given in the *Transactions* must be carefully studied.

Dr. H. Weber presents a review of "Professor Pettinkofer's theory of the *mode of propagation of cholera.*" The theory has of late years obtained the assent of many distinguished authorities. It assumes that "the two essential conditions for the propagation of cholera, and for the occurrence of epidemics of the disease, are human intercourse, and a certain nature of the locality; or, in other words, the excretions of cholera patients to give the germ, and a soil for its development." The details of this theory are no doubt familiar to our readers as they were published in the *Medical News* for March, 1866, p. 40 *et seq.*, and we need not therefore dwell further on the subject.

An account of the "*Epidemic Varioloid Varicella* in Jamaica" is given by Dr. J. Anderson. It is of a strictly local character. It has some bearing, however, upon the question as to the relation, if any, which exists between varicella and the varioloid disease.

H. Hadlow, Acting Surgeon, gives an account of "an outbreak of *Dysentery* in H. M. Ship Conqueror," in the summer of 1864. It presents no points of especial interest.

The next paper is on "the theory and mode of *Propagation of Cholera*, by Dr. B. W. Richardson.

The views of Dr. R., on the cause and propagation of cholera, need not be presented, as they were laid before our readers in the No. of the *Medical News* for Sept. 1866, p. 156 *et seq.*

A very instructive paper is presented by Dr. W. Dickson, R. N., "on *Scurvy in the mercantile marine.*" It adds, however, but little to our present knowledge of the cause and prevention of scurvy on shipboard.

In the next paper Dr. J. B. Sanderson treats of "*the Cattle plague* in its epidemiological aspects." This paper will be read with interest and profit by all who are interested in the investigation of the cause and propagation of the cattle plague with a view to the establishment of a true basis for prophylaxis.

Besides the papers we have noticed, the volume before us contains three presidential addresses, and a very neat biographical sketch of the late Dr. Benjamin G. Babington.

The appendices are made up of the Report of the Smallpox and Vaccination Committee (April, 1864). Report on the Questions submitted by Dr. Farr to the Council, concerning the Classification of Diseases (Feb. 1865). Report of the Council on Cholera Hospitals (July, 1866). Memorials concerning Cholera to the Privy Council, etc. (September, 1865). D. F. C.

Art. XX.—*Report on Leprosy by the Royal College of Physicians. Prepared for Her Majesty's Secretary of State for the Colonies. With an Appendix.* 4to. pp. 244. London: 1867.

This highly interesting report is based upon the replies made by competent persons, in the British Colonies of the West Indies and elsewhere, to queries propounded by the College at the request of the Colonial Secretary. The queries were seventeen in number. The leading points to which they have reference will be understood by the following abstract of the conclusions on the subject-matter of each, drawn up by a committee of the College from an examination of the entire evidence comprised in the answers received.

1. The distinctive characters of leprosy are the same in all parts of the world where the disease has appeared. They are certain forms of cutaneous eruption and discoloration, with a tendency to ulceration or to death of the affected parts, with disorders of innervation, more particularly the impairment or loss of sensibility.

There are described two forms of the disease, the *tuberculated* and the *anæsthetic.* The loss of sensibility is not confined to the second form, but in it the anæsthesia generally occurs earlier, and is more marked, than in the first. As the two forms not unfrequently coexist, or succeed one another in the same patient, they must be regarded as merely modifications of one morbid condition.

As varieties of non-tuberculated leprosy are included cases sometimes designated as *leucopathic*—characterized by white spots or blotches on the skin, which are more or less decidedly anæsthetic; also cases in which the eruption